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**ON THE QUALITY OF THE SWEDISH NATIONAL ACCOUNTS FROM THE  
PERSPECTIVE OF SOME USERS**

Invited Paper submitted by Statistics Sweden\*

**I. INTRODUCTION**

1. The aim of this paper is to discuss views from some users on the quality of the Swedish National Accounts.
2. Some of the most important users have for several years expressed critical views on the quality of the Swedish National Accounts. This has come at a time when the quality in certain aspects according to Statistics Sweden has been improved. On the other hand there are problems with the sources of data (both quarterly and annual) due to the fact that the big Swedish companies

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are becoming more international. This means that they sometimes can't separate between what is produced in Sweden and what is produced abroad. Corresponding problems have as far as I know occurred in other countries, so it's not just a Swedish problem.

3. Much of the Swedish debate has concerned revisions of the annual accounts compared with the preliminary quarterly estimates. The users want to know if the revisions are bigger in Sweden than elsewhere and how they can be explained. The quality of the sources of data for the National Accounts has also been much discussed.

4. To sort these things out the Swedish Government appointed the Commission on the review of Economic Statistics. The aim of the Commission is to propose how economic statistics can be adapted to meet the expanding and new needs of statistics. This applies especially but not only to the quality of the National Accounts. The Commission interviewed more than 30 important users as the initial part of this review of Economic Statistics.

5. Some of the users included were from institutions making forecasts and structural analysis. Interviews were made with key persons representing e.g the Ministry of Finance, the National Institute of Economic Research, the big banks, trade unions and employers organisations.

6. The interviewed persons were free to suggest improvements without considering the costs for the suggestions. The users were free to give comments, even if they included misunderstandings or lack of knowledge about the statistics commented on. It turned out that some of their suggestions already have been introduced, which revealed the need for better and more information from Statistics Sweden.

## **II. QUALITY DEFINITIONS ACCORDING TO THE RECOMMENDATIONS OF STATISTICS SWEDEN**

7. There is no special Swedish quality recommendation on National Accounts. However Statistics Sweden has issued a recommendation on quality concepts concerning all statistics. This means that the National Accounts follows this recommendation where it is possible. The views of the users should be seen as one way to get information about the total quality. According to this philosophy total quality includes two central points:

- i) The quality is determined by user's opinions;
- ii) Quality refers to all aspects, which are of relevance for how well it meets users' needs and expectations.

8. For the producer, the quality has a descriptive meaning. For the user, quality has a more valuing significance. The user is sovereign in knowing about his/her needs and expectations, and is, therefore the one to make quality assessments.

9. In Table 1 below, the Swedish quality concept is structured by main components and subcomponents.

Table 1. Quality concepts for official statistics

1.	Contents
1.1	Statistical target characteristics
1.2	Comprehensiveness (do we show vital aspects from the point of view of the users)
2.	Accuracy (difficult for NA)
2.1	Overall accuracy
2.2	Sources of inaccuracy
2.3	Presentation of accuracy measures
3.	Timeliness
3.1	Frequency
3.2	Production time
3.3	Punctuality
4.	Comparability and coherence
4.1	Comparability over time
4.2	Comparability between domains (different sources which are said to show the same thing)
4.3	Coherence with other statistics
5.	Availability and clarity
5.1	Dissemination forms
5.2	Presentation
5.3	Documentation
5.4	Access to micro data
5.5	Information services

### **III. USERS VIEWS ON THE SWEDISH NATIONAL ACCOUNTS**

10. In this section, I will present the views of the users without commenting and make my comments on those views in section 4. Almost only critical views are discussed since our aim is to improve the quality as seen from the users perspective.

## **1. Contents (missing or incomplete sources)**

11. The Commission drew the conclusion that there are four most important areas of the economic statistics with missing or incomplete sources. They are:

- price measurement for the business service sector;
- IT statistics;
- better input/output statistics;
- better measures of capital stocks.

12. There were of course also other requests concerning different quality aspects of both the National Accounts and its underlying primary statistics, which the Commission will look further into in its continuing work.

## **2. Accuracy**

13. Many of the users seem to consider the annual accounts as being of good quality and to think that the quality of the preliminary quarterly accounts is good if they come close to the annual estimate. And since revisions seem to have been made upwards for the last 10 years they think that Sweden needs better quarterly national accounts. Other users say that you can't avoid revisions.

## **3. Timeliness**

14. A way to reduce the revisions suggested by the users is more and better analysis of the primary statistics used in the National Accounts, which of course takes more time. Some users can accept that we publish later with more details and analysis. Most users tend to want us to publish quicker and compare with how the American preliminary GDP is published. Several users want quarterly flash estimates for every quarter, but some have critical opinions on the flash estimate we currently make for the second quarter.

## **4. Comparability and coherence**

### **4.1 Over time**

15. We have published data according to the ESA 95 starting with 1993. When the users were interviewed there were no time series according to ESA 95 for earlier years. Most users need long time series, some of them want Statistics Sweden to present calculations according to ESA 95 back to the 1950s or 1960s.

16. There are different opinions about how soon revisions due to new and better sources should be introduced.

#### 4.2 Between NA and sources

17. Many users complain about sources and NA showing different developments and want us to publish more information about differences than we already do.

#### 4.3 Internationally

18. Some users want us to use the same deflator for computers and software as USA. One user wants us to use a parallel and different Industrial classification even though we follow international recommendations.

19. Some users think that too much of our resources are spent on international comparability, while other users stress the importance of international comparability.

20. Many users complain about the lack of comparability of statistics on wages and employment.

### **5. Availability**

21. Many users need more details on production and capital formation than we publish.

22. There is also a need for more descriptions of calculation methods, methods for balancing and methods for seasonal adjustment.

23. There seems to be a need for seminars and more contacts with Statistics Sweden.

## **IV. COMMENTS ON USERS VIEWS**

### **1. Missing or incomplete statistics**

24. The areas, which have priority according to the Commission, also have priority in the work of the National Accounts Division of Sweden.

25. For a long time we have been trying to find better indices for the business service sector. Currently we are working together with the price statisticians trying to construct new indices for the business service sector. We have to give high priority to this project in order to comply with the EU regulations.

26. A special project in Statistics Sweden is working on guidelines for better IT statistics. We have had many questions on this subject but have not had any guidelines. The National Accounts can supply some of the information (for example hardware and software) needed by users. However, for

some time we have had to put a lower priority on capital stock calculations. This means that detailed capital stocks statistics according to SNA 93 have not been available to users. We are currently working on this.

27. We have not published any complete input-output tables since 1985, but we have produced supply and use tables annually. The most recent supply and use table was calculated for 1999. In 2002, we will deliver a new input-output table for 1995 to Eurostat. The Commission is discussing how to get more information on the input structure of the business service sector and how to obtain better information about trade margins. We of course support this and hope that resources will be granted for this kind of work.

## **2. Revisions**

28. The users who make forecasts use the latest quarterly accounts. For that reason they of course want the definite estimation in the annual accounts to be as close as possible to the first estimates. But since the annual accounts in Sweden are based on much better and more complete sources, revisions become hard to avoid. Some users suspect that we always make upwards revisions and that revisions are bigger in Sweden than in other countries. The users want more information about the revisions and their causes, which would be helpful in their forecasting work.

29. Of course the size of revisions is not a good measure to compare between countries since different countries have different methods for quarterly and annual accounts. I still think it would be interesting to make a comparison of revisions of growth rates between countries. The Commission is currently working on this. No definite results are available but there are preliminary results for annual GDP growth rates, see table 2 below.

30. Several observations can be made on the results:

- (a) the Swedish revisions are higher than the mean and the same as the median;
- (b) most countries have made more revisions upwards than downwards;
- (c) a group of countries have a mean near zero;
- (d) another group of countries including Sweden revise more upwards;
- (e) for some countries there might exist a correlation between the sign of revision and the sign of the growth rate but this must be further investigated.

31. More work will be carried out on the revisions of quarterly accounts and concerning some main aggregates.

Table 2. Revisions of GDP, percentage points of growth rates 1980-1998  
First estimate of the annual growth rates from four quarters compared with the definite annual  
growth rate

	mean	median	range
Australia	0,4	0,5	2,2
Canada	0	0	2
Denmark	0,2	0,1	2,3
Finland	0,4	0,4	3
France	0,1	0,2	1,5
Germany	0	0,1	2,6
Netherlands	0,4	0,4	1,9
Norway	0,2	0,3	2,7
New Zealand	0,1	0,1	2,6
Sweden	0,4	0,3	1,3
UK	0,3	0,3	2,3
USA	0,1	0,2	1,7
All	0,2	0,3	3,8

### **3. Production time**

32. According to the EU regulations the Swedish quarterly national accounts will be published within 70 days after the quarter for 2002 and onwards. We publish a flash estimate for the second quarter after about 35 days.

33. The Commission intends in its further work to assess the possibilities to produce National Accounts as fast as the USA and the changes in the primary statistics and calculation methods it would demand. My view is that this would require other methods, new sources and more resources.

### **4. Comparability and coherence**

34. At the moment aggregated annual and quarterly time series according to SNA 93 back to 1980 have been completed. Next year we hope to be able to calculate more details back to 1980. At the moment there are no plans and no resources to go any further.

35. A special project at Statistics Sweden is currently working on better coordination of the different sources for wages and employment.

36. We have published some comments about the differences in coverage etc. between the sources and National Accounts, but much more must be done.

## **5. Presentation**

37. The Commission report shows that the need for explanations and descriptions is enormous. So far, we have not been able to satisfy the users in this aspect. But we are planning some things for this year. The detailed description of the annual accounts, which has been made according to the requirements of the EU, will be published on the web page. We will also publish more information on seasonal adjustments. As mentioned before we already comment on differences between the sources and the National Accounts. We are currently discussing how to give more information about the balancing process. Furthermore, the Commission has given our former Head of the National Accounts the task to write a documentation on calculations of different parts of the National Accounts. This documentation will be published as a special report from the Commission.

## **V. Conclusions**

38. The most important conclusion is that the part of the total quality, which includes description of methods and availability of results, is very important to the users. Since we haven't had enough resources for this we have to do extra work explaining our methods.

39. Another important conclusion is that we need better sources and more resources for the quarterly accounts.

40. It would be interesting to have comments on the following subjects:

- (a) The role of the user in the assessment of quality;
- (b) What experiences do you have of the users views on total quality?;
- (c) Do you agree that upwards revisions seem to be more frequent than downwards revisions (at least with a positive growth rate) and what is the explanation for this?
- (d) Do countries with less revisions have better quarterly accounts or may be less new sources for annual accounts?

## **Sources**

### **The Commission on the review of economic Statistics**

Report on the need for economic statistics (Behovet av ekonomisk statistik, SOU 2001:34).  
Results from an unpublished study on revisions in NA made by Lars-Erik Öller.

### **Statistics Sweden**

Quality definition and recommendations for quality declarations of official statistics  
(-mis 2001: 1).